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March 18 2002

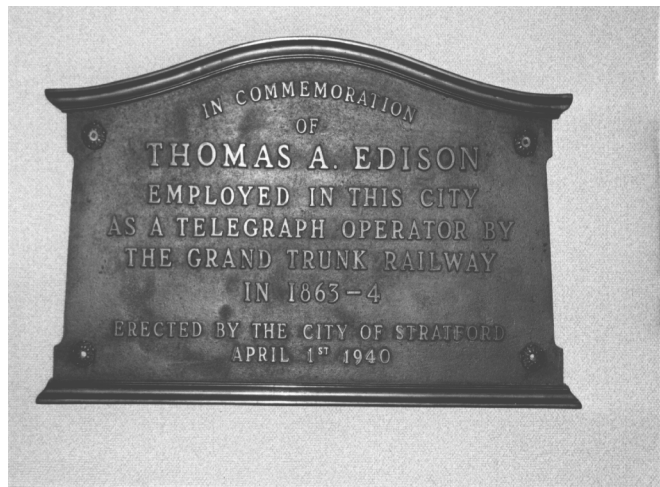
Dear Friends:

W9TO, SK. It is with sadness that I report that Jim Ricks, W9TO, passed away on Saturday, October 20, 2001 after a long bout with prostate cancer. Jim was the creator of the famous "TO" Keyer, which was marketed by Hallicrafters (as a vacuum tube design) and then later adapted to solid-state design. Jim spent his last years in a rest home north of Seattle, Washington. I visited him several times over the last three years. Jim was a real gentleman. *Lynn Burlingame.*

Edison in Canada
By Stan Riome (VE3STN)

During a recent visit to the old railway station at Stratford, Ontario, I was delighted to find this plaque strategically placed on a wall. Upon asking an old railroader at the station why Thomas Edison, then at the ripe old age of 16, had been fired from his job, he replied, "because he was always tinkering with the equipment".

Well, that's one way of saying it. A fuller explanation is published in Norman Wymer's book, *Great Inventors* published in 1957 by Oxford University Press.



"After completing his training, he obtained a job at the telegraph office at Stratford, Ontario. At that time he was working on night duty and spending most of the daytime at his work-bench instead of sleeping; therefore, when he reported for duty each evening, he could hardly keep his eyes open. There was very little to do; sometimes a whole night would pass without his either sending or receiving a single message. In order to show that he was still awake he had to send through a Morse signal to the chief operator at the stroke of every hour; and indeed, but for this, he could easily have slept throughout the night without anyone knowing. Edison decided to work out some way of sending these signals automatically.

The signal which the telegraphists had to send was always the same. Edison, therefore, invented a special alarm clock which would mechanically transmit the signal each hour, and he incorporated this into his telegraph circuit. As soon as this proved to work reliably, he left it to send the hourly signal, and he went to sleep. Unfortunately for him, the chief operator paid him an unexpected call one night, and found him sound asleep. A few nights later, two trains nearly collided because he had been asleep and had failed to receive an important message telling him to stop one of them. Naturally, he lost his job".

This second blow to his employability (geniuses rarely are) came following an incident on the Grand Trunk Railway running between Detroit and Port Huron, when a stick of phosphorous fell to the floor of a coach in which he had set up an unauthorized laboratory and set the car on fire!

These and other vignettes on Thomas Edison's life add credence to the adage "You can't keep a good man down". *Stan Riome, VE3STN.*

The Telegraph Keys That Won The War! The J-37 Family of Keys By Scott Hill (K6IX)

The following information is adapted from my web site at: www.qsl.net/k6ix

I. Introduction

During WWII, the Korean War, and even into the Vietnam era the U. S. Signal Corps designated many of their telegraph (Morse code) keys with a "J-" and a number. The real workhorse key during those years was the J-37. There are many more glamorous wartime keys around, but the keys that carried the bulk of the action were the J-37 keys. The J-37 key is unusual because, with the addition of different bases and connections, it became part of other more special purpose keys. All the keys shown below are based on the J-37.



The J-37 Family of Keys

II. Descriptions of the keys

Front and center in the picture above is the **basic J-37**. It has a small, light frame made of black phenolic resin. The electrical connections are easily accessed metal straps fastened directly to the binding posts, with the leaf spring serving as one of the connections. The characters "J-37" are molded into the top left, front of the frame. The trunnion posts are also molded into the plastic frame, and the button, lever, and adjusting screws are standard triumph key design. There is a Japanese copy of the J-37, which has the words "Soling Japan" molded into the bottom, and does NOT have "J-37" molded into the top.

In the upper left corner of the picture is the **J-37 Mae West**. The base for this key has an extended set of binding posts on the rear for attaching a long set of connecting wires, and indentations on each side to allow the wires to be wrapped around the base of the key for storage in a training set. This key was not given its own "J-" number as was done in most other cases when the J-37 was put on a special base, so the imaginative GI's found their own name for it.

Second from the top on the left side of the picture is the **J-43**. In this case the standard J-37 is on a rectangular base stamped with a white "J-43" on the left side and a large toggle switch on the right side. The toggle switch is marked "OPEN" at the back and "CLOSED" at the front. The J-43 also has an additional binding post, marked "RELAY", and a small metal wicket mounted on the right rear of the base. The toggle switch has no effect on the normal operation of the key, but when the switch is set to CLOSED there is continuity between the "GND." (left) terminal on the frame and the "RELAY" binding post on the right rear of the base.

The third key on the left side of the picture is a **J-44**. The base has "J-44" stamped in white on the left front, and a small slide switch on the right side which is marked "VOICE" at the back and "TELEG" at the front. The slide switch acts as a circuit closer, shorting the two binding posts when in the "VOICE" position.

At the bottom left in the picture is the **J-45**. This is the well known "leg clamp" key consisting of a J-37 mounted on a metal plate hinged to a spring metal, inverted "U" shaped clamp made to fit snugly around the thigh of a seated user. It is usually found with the cable intact, and makes a great mobile key for ham radio use. Later models were designated as KY-116/U rather than J-45.

In the center on the right side of the picture is the most "plain Jane" of all keys, the **J-47**. In this case the J-37 frame is mounted on a black Bakelite base with nothing else on it except "J-47" stamped in white on the left side. There are two notable variants of the J-47, the first with rounded corners and "J-37" molded, rather than stamped in white, on the base, and the second, known as the Lionel J-47, which is a strange combination of a Lionel J-38 frame and a J-47 base. I do not yet have pictures of a Lionel J-47. The Lionel J-47 is not particularly rare, but for a while I thought it was a kludge.

At the top right of the picture is an unusual key with the designation **J-48-A**. This key consists of a J-37 mounted on a flat army drab metal plate, a short cable terminated with a 1/4" phone plug, and a cover which is held in place by two screws. The characters "J-48-A" are stamped into the front of the bottom plate, which also has slots in it for mounting on a surface with matching studs. There also exists a model J-48 (no "-A") that looks the same on the outside, but does not have a J-37 on the inside. You can see a J-48 and what the key inside looks like on Tom Perera's Web Page.

The **B-19**. I am unsure of the proper designation for the key at the bottom right of the picture. The base of the key is stamped "KEY AND PLUG ASSEMBLY NO. 9". In the N7CFO Keyletter #28 there are copies of an advertisement from the June 1943 issue of Electronics Magazine in which this key is identified as the B-19, so that is the designation that I will use. This key, like the J-45, was apparently intended for mobile use, fastened to the leg of the operator with two web straps. It is mounted on a thin aluminum base and has a black aluminum cover secured by 4 sheet metal screws. Last, but certainly not least, at the top center of the picture is the **Telegraph Set TG-5-B** with its attached **J-41-A** key. Technically this device does not use a J-37 key, but the J-41-A is close enough for me. To the best of my knowledge this device was used for connection to wired telegraph circuits. The key contains an extra terminal and is wired such that the back terminals have continuity when the key is up and the two terminals on the right side of the key have continuity when the key is down.

III. Conclusion

J-37 keys are small, light, and tough as nails. Their size and construction make them an excellent choice for a backup or portable key. Many people think that leaf springs, which are used on the J-37's, have better mechanical characteristics than coil springs (which are used on keys like the J-38 and Speed-X hand keys) and therefore prefer the J-37 keys. With a little patience an excellent J-37 key can be purchased for a reasonable price at flea markets, hamfests, and on-line auctions.

To see individual detailed pictures or to get more information on each of these keys you can go to my web site (given at the beginning of the article). Another excellent source of information on J-37 keys is *The Vail Correspondent* which you can get from Tom French at Artifax Books. Issues #4, #5, and #14, all contain information about J-37 keys.

L.S. Brach Manufacturing Company

by Dan Howard

(Reprinted from the August/October 1995 issue of *Old Familiar Strains*)

When this project began, I had no idea that Brach made so many different products over so many years. In addition to the arresters, insulators, and antenna kits shown in the following pictorial section, there are many more for which pictures were unavailable.

Leon S. (L.S.) Brach was apparently quite an inventor. There was not room in this issue to list even the radio-related patents that he held! According to patent filings, Mr. Brach resided in New York City in the teens. In the 1920's he cited 325 Harrison St., East Orange, NJ, as his place of residence. Mr. Brach became an associate member of the Institute of Radio Engineers in 1922.

According to ads, Brach began manufacturing lightning arresters in 1906. Sales during the first few years were to fire and police departments, telegraph companies, railroads, The U.S. Army, and others to protect signaling wires.

During World War I, Brach made a retractable airplane antenna. Products sold to the armed services may carry Brach's Manufacturer Designating Symbol "CLS". Brach's decision to enter the home radio market probably anticipated the publishing of the Fire Underwriters rules in May, 1922. These rules require the use of "approved" lightning arresters with outdoor antennas. Users of "unapproved" equipment risked losing their fire insurance! According to ads, the company actively

manufactured products through World War II and into the age of television. The 1955 *Radio's Master* shows a full line of TV antennas and accessories. The company had been purchased by General Bronze by the early 1950's. (In 1958, General Bronze bought out Cornish Wire Co (CORWICO), also a popular lightning arrester manufacturer).

Key Dates and Addresses

- 1906. L.S. Brach begins manufacturing.
- 1911. Patents Carborundum lightning arrester. (Sept.) Pat #1,004,235.
- 1917. Retractable aeroplane antenna is made for World War I.
- 1922. L.S. Brach Mfg Company 129 Sussex Ave. Newark, New Jersey (*Proceedings of the IRE*, April 1922).
- 1922. L.S. Brach enrolled as an associate member of the Institute of Radio Engineers.
- 1922. First ad run in *QST* magazine (May).
- 1926. Brach insulator design is patented.
- 1930. Type 300 bakelite arrester is patented. (April) Pat # 1,752,660.
- 1942. L.S. Brach Mfg Corp 55 Dickerson St, Newark, NJ Pres: L.S. Brach Treasurer: Mrs Madeline Brach. (*Newark City Directory*)
- 1943. L.S. Brach Mfg. Corp. 55 Dickerson St, Newark, NJ. Manufacturers of radio antenna lightning arresters, municipal signal supplies, electrical specialties. Employees: 200 men, 100 ladies. (*Industrial Directory of New Jersey 1943 - 1944*)
- 1946. New plant and office: 200 Central, Newark, NJ. (1946 *Radio Handbook*)
- 1951. Brach Mfg. Corp listed as a Division of General Bronze Corp (*Radio's Master*, 1951 per Dick Mackiewicz) (Actual buy out may have taken place earlier).
- 1958. General Bronze Corp buys out Cornish Wire Company, (Corwico), also a lightning arrester manufacturer and a former Brach competitor. (*Wall Street Journal* 12/10/58)
- 1967. New Address: 899 Main St, Sayreville, NJ. (*Thomas Register*)
- 1968. Listing now says: "See JFD Electronics Co. 15th Ave at 62nd St, Brooklyn NY" (*Thomas Register*)

Nickel Plating. Anyone who is involved in repairing a key or homebuilding one will eventually be faced with the requirement to plate the key or replacement parts. This immediately brings to mind plating tanks, anodes, cyanide compounds and toxic fumes. It doesn't have to be that way because there are techniques and kits available to do the job with minimal expense and effort.

Plating can be broken down into two different techniques, chemical and electroplating. Electroplating can be subdivided into tank or brush/swab plating. Brush and swab plating works best for plating small parts and can be easily done at the kitchen table. Tank plating will not be covered since it is not amenable to small one off plating efforts and can be an environmental hazard. Brush or swab plating is offered by the following dealers:

Caswell Plating
4336 Route 31
Palmyra, NY 14522
www.caswellplating.com

Texas Plater's Supply
2453 W. Five Mile Pkwy
Dallas, TX 75233
(214)330-7168 (No web site)

Brush or swab plating uses a special brush or swab which is connected to the positive side of your battery pack or power supply. The negative side of the supply is connected to the work being plated. The brush/swab is dipped into the plating gel and is stroked across the work to be plated. You can actually watch the plating being deposited on the work. Depending on how well the surface is prepared minimal polishing is needed after plating.

While the chemical method requires more steps it will allow you to plate larger objects such as key bases and lever arms. Caswell plating sells what they call an Electroless plating kit which uses the chemical plating process. Basically all is needed is a bit of cookbook chemistry - "Mix 'X' ml of bottle A with 'Y' ml of bottle B, add 'Z' ml of distilled water, heat to just under a boil (195 F), hang the object to be plated from a steel wire and suspend in the solution, etc. The thickness of the plating depends on how long the item is suspended in the solution. Caswell also provides replenishment solution to keep the chemical composition at the right level. As an added plus materials are provided to neutralize the solution after you're done so that you may safely dispose of the solution down the drain. You must keep in mind that the final appearance of the plated object depends on the surface preparation that you do prior to plating. Imperfections will be magnified by plating, not concealed.

Tim Soxman, W3ZVT

Aldis Lantern. The original Aldis lantern was designed and built in England by the Aldis Brothers about 1916 and was used during WW I, hence the name Aldis. It had a diameter of a little over 5 inches.

Prior to and during the early part of WW II, a number of companies in England, Canada and the U.S. built this lantern which was designated as the Mk. 4. It had a reflecting mirror which pivoted. The lantern was first aimed at the target or receiving station, then the bottom trigger on the handle was actuated which turned the lamp on. When the upper trigger on the handle was actuated, it caused the mirror to pivot so that the reflected light was then aimed at the receiving station. This Mk.4 lantern had a lamp which was fastened to the side of the lantern.

During WW II, the British brought out a modified version of the lantern which was designated as the Mk. 5 and had a diameter of about 6 1/4 inches. In the Mk. 5, the reflecting mirror was fixed. The lamp was surrounded by a metal sleeve which retracted when the upper trigger was actuated,

allowing the rear of the lamp to shine into the reflecting mirror. The front of the lamp was painted black to allow the sleeve to retract. The lamp in the Mk. 5 lantern is quite different from the lamp in the Mk. 4 and resembles an automotive type lamp (but slightly larger). The base of this lamp has a circular ring soldered to it which has 3 slots in it which mate with 3 slots in the lamp socket. I am able to make my own lamps for the Mk. 5 lantern by obtaining the fastening ring from other obsolete lamps and soldering them to the right size of lamp to fit the Mk. 5. Actually the lamps I make have a slightly lower wattage than the correct Mk.5 lamp but quite powerful enough to demonstrate at flea markets. I have several Mk.4's and Mk.5's in my collection and was fortunate enough to get the Mk.4's with their original lamps, but I have not seen any spare Mk.4 lamps around and suspect they are rare and difficult to find. The Aldis type Mk.5 lantern is still being made in England by the following:

FRANCIS SEARCHLIGHTS
UNION ROAD
BOLTON, LANCASHIRE BL2 2HJ
ENGLAND

I have some literature on the Mk.5 from Francis Searchlights and they can supply spare lamps for the Mk.5, but their price made me decide to make my own. There is a possibility that the Aldis Co. is still in business in England, and if they are, might have some Mk.4 spare lamps, but I don't have their address.

I should mention that on reviewing some of the literature on the Aldis and Aldis type lanterns, I note that they usually refer to the Mk.4 lantern as the 4 inch lantern, and the Mk.5 as the 5 inch lantern. These dimensions are approximately the diameter of the respective mirrors, so from now on, I shall call them the 4 inch and the 5 inch lanterns. *Murray Willer.*

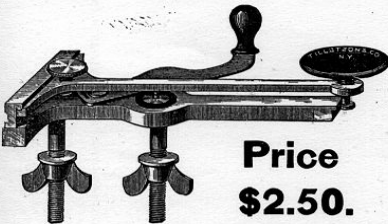
Victor Key. L.G. Tillotson & Co. advertised this key heavily during 1883. This ad is from the December 20, 1883 issue of "The Journal of The Telegraph". Check out the key's knob - it was also used as the lever's height adjustment. Which probably walked in actual service, hence dropped as a feature in the "Improved" model. A legless version (with base) was available for 50 cents more. **John Casale.**

THE "VICTOR" TELEGRAPH KEY.

PATENT APPLIED FOR.

The Greatest Improvement in Telegraph Keys ever made.

THE EASIEST WORKING.
THE MOST POSITIVE CONTACT.
The Lightest Lever.
The Most Perfect in Construction.
No Trunnion Connections.
No Side Motion to Lever.
No Back Adjusting Screw.
The Neatest, Nicest, Handiest and Best Key in the World.



Price \$2.50.

Since the earliest days of Morse Telegraphy there has been little or no radical change in Telegraph Keys until the invention of the Victor Key. Telegraphers who take hold of the "Victor" Key will at once notice that there are but two points of adjustment to regulate. These are the play of the lever and the stiffness of the spring. There are no loose trunnions to tighten up, and no tight trunnions to loosen. The lever can never move to one side or the other; and the point can never be worn into wedge shape. The play of the lever must of necessity be directly up and down, without side motion; and consequently the points must always strike fairly and squarely. The imperfect trunnion connections of all old style keys are completely done away with in the "Victor," and the five minutes' labor of the "relief" operator in twisting adjustment screws to get his key lever to work "to suit" are at once ended. These are the most prominent points that will present themselves to the Telegrapher who uses the "Victor" key for the first time. Add thereto the light spring lever, which also prevents wearing of the connection, and the long leverage, and you have the two leading advantages claimed for the most perfectly improved of modern telegraph keys. By a turn of the knob to the left the play of the lever is decreased, or by a turn to the right it is increased, thus avoiding the imperfect set screw adjustment heretofore universally in use. These advantages present themselves so clearly and emphatically to every telegrapher that this key has only to be tried to receive the commendation already universally accorded it by every telegraph man who has examined it, which is "The Best Key I Ever Saw."

To enable all to test the merits of this great invention, we will, on receipt of price, \$2.50, send, post-paid, by registered mail, to any part of the United States or Canada, a sample VICTOR KEY.

VICTOR KEY mounted on highly polished Hard Rubber Base, with Top Connections, \$3.00, post-paid.

Morsecode Bits and Pieces.

D&K Dinger. I e-mailed the Lakewood Public Library reference desk in the Cleveland area, requesting information about D&K - here is the response that arrived by email:

Dear Sir: D & K Manufacturing Co. is listed in the 1909 Cleveland City Directory as being owned by Paul Dinger and August Krastin. I am assuming these to be the D&K. Thank you for your question. If we can be of further assistance please let us know. Lakewood Public Library Reference staff.

How about that? The answer to both questions: who were D&K and where did the name "Dinger" come from? **Russ Kleinman**

Dunduplex single paddle. Today a fellow showed me a Dunduplex single paddle bug, serial #5104; on the bottom it has a decal "sold by Vibroplex (trademark) 253 Broadway, NYC". This is the first Dunn I've seen or heard of with a Vibroplex decal. Any others? Holly's book shows an Albright ad for Dunn bugs, c. 1911. **Neal McEwen.**

Phili-bug and Kungsimport. Hankan (Hank) Svard, a former RO at the SAG Goteburg Sweden shore station, tells me that one of his battery mates, Philip Lennerwald built a rather big and clumsy bug called the Phili-bug and he sold quite a few of them. Another one for us to look for! Who is keeping a list of International bug makers?

Svard tells me the Swedish word for sideswiper is "kniv" which translates to knife in English. He also says there is no Swedish word for 'bug', so they just say 'bug'. Svard says that he and his friend Bengt-Arne Jockert, SM6CKU, made approximately 200 "Kungsimport" sideswipers in the late 70s and about 50 of them were sold to American operators. Svard used one SAG and said he was instantly recognized by ship's ROs. **Neal McEwen.**

Mecograph.

- I found an ad in the January 1908 edition of the Railroad Telegrapher. It pictures the "early" round weight Model 3 that Doug mentions in his article however this key is called the #5 and has a different "frame" mechanism than the later round weight Model 3's. The text of the ad discusses the patent infringement lawsuit and says that this model "eclipses everything else in the line of transmitters, even MECOGRAPH No. 3." Apparently this key wasn't much of a success since I don't think anyone has ever seen one and in Doug's article he shows an ad from a later issue of the 1908 Railroad Telegrapher which pictures the more common frame of the Model 3. **Tony Rogozinski.**
- I could have written a whole chapter just on this key. I saw the same picture Tony is talking about in the Key & Telegraph section of the Feb. 1996 OTB. The key has the Dinger-like tensioning device, and a double-lever design, like the patent drawing for the round weight key. It also calls the key a Model 5. This would mean that the cost-reduced model 3 would probably be a Model 4, but I don't think this was ever mentioned in any of the advertisements. It looks like there were 3 different designs presented in advertisements for the round-weight Mecograph. Only 1 appears to exist. **Doug Palmer.**

MTC, 1949 meeting. I just received a couple paper items which had some interesting items to note: First is a program for a gala dinner held in Los Angeles by the Morse Telegraph Club - it's 1949 annual meeting. Interesting set of people at their dinner, among them:

Gene Autry, Dr. Lee DeForest "inventor of the radio tube" and Ted R. McElroy, "worlds champion wireless operator and owner of McElroy Manufacturing". Has anyone seen that specific reference to him before? That would have been a good ticket to have!

The second piece was a 1920's WU promotional card which illustrated the Landline and International codes. At the top was a line drawing of a snail with the inscription "Don't write - telegraph". And we thought "snail mail" was a new term. In fact I think that term appears in some late dictionaries as a product of email language. *Pete Malvasi.*

Maniflex Sideswiper. The Maniflex was made by the French company, Dyna c. 1950. The word Maniflex has an interesting derivation. It is the combination of 'man' and 'flex'. 'Mani' come from the French word for key, 'manipulateur.' 'Flex' comes the French word 'flexible' having the same meaning as it does in English and refers to the flexibility of the lever blade. There is no French equivalent for 'sideswiper' so these keys are called "Lame de scie" (meaning hacksaw blade), or "manipulateur horizontal". Besides Dyna, there was another French sideswiper called the "DOUBLEX", made by the same maker as the "VIBRO-MORS" bug, but they seem to be fairly uncommon.

Dyna's founder was A. Chabot. He began his career working for Pericaud, the famous wireless manufacturer in 1909, where he designed the first crystal set for them. After WWI, Chabot became president of Pericaud. In 1921 he founded "A. Chabot" with the trademark "Dyna." The company produced radio equipment for both amateurs and professionals. The address from ads 1940 to 1977 was 36, Avenue Gambetta, Paris. The most common Maniflex was the model 29406 T: Standard model, aluminum (black or gray painted) base, tungsten contacts, maximum voltage 2300 Volts @ 50 Hz, with nickel plated parts. This model seems to be not rare, but not common in France. Besides the 29406 T there was the 29408 T : (1942) "Maniflex à contacts TAR", (with TAR contacts), "TAR" stands for "Transmission à réception" (transmission to reception). It is the same model as the 29406 T with an extra set of contacts switching an antenna change-over relay. When the blade of the key is at rest the antenna is connected the receiver and disconnected during keying. No such pieces are known to exist in collections. The French seem to be rather avid users of sideswipers at one time. *Neal McEwen.*

Levenson. I am puzzled why the Levenson name is always spelt "Levinson" on the reflector. I have a straight key which has Levenson embossed on the base and I can only ever recall it being spelt with an "e". I haven't seen the jigger so it may be spelt with an "i" there. Any solution please! Kind regards. *Ron McMullen.*

Samuel F. B. Morse Papers online. The Library of Congress just mailed this out. This should be of interest to historians and collectors. Check out the web site!

The National Digital Library Program of the Library of Congress and the Manuscript Division announce the release of the online collection of the Samuel F.B. Morse Papers available at the American Memory Web site at <<http://memory.loc.gov/ammem/sfbmhtml/>>

Through the generous support of the AT&T Foundation, a selection of 6,500 library items, or approximately 50,000 digital images from the collection is now available. The Morse Papers consist of correspondence, letterbooks, diaries, drawings, clippings, printed matter, maps, and other miscellaneous materials documenting Morse's invention of the electromagnetic telegraph and his participation in the development of telegraph systems in the United States and abroad, as well as his career as a painter, family life, travels, and interest in early photography and religion. The online collection, dating from 1793-1919, offers a well-rounded portrayal of the life of Samuel F.B. Morse.

The collection also includes sketches relating to the telegraph, art, and places Morse visited in Europe, as well as correspondence from many nineteenth-century American artists and historical figures such as James Fenimore Cooper, Thomas Cole, the Marquis de Lafayette, William Henry Seward, Roger Brooke Taney, Mathew Brady, and Eli Whitney.

Automatic Cram. I've got what I think is the answer to one of those silly little questions you come up against while doing research. George H. Clark designed a relay key for the Stone Tel and Tel Co in 1902. He named the device the "Automatic Cram." There was no information until now available regarding why it was called this. But check out the following paragraph I came upon as I re-read portions of text at the Smithsonian website:

"STONE TELEGRAPH AND TELEPHONE COMPANY. Clark received a "cartload" of records after this company failed. Clark mentions that he was to receive some STTC records from Mr. E. R. Cram. Clark wrote a biography of Stone (Class 4, Box 40A, Bound Volumes)."

Aha! There's the name "Mr. E.R. Cram". This has to have been a play on words on the name of an associate at Stone Tel & Tel Co.! Another mystery solved! **Russ Kleinman.**

Straight Key Speed. Some time ago there was a discussion on this list about the practical limit for sending on a hand key. Today I found this reference in an old text which is quite interesting.

"In a telegraph tournament held in New York in May, 1898, the winner in the championship 5-minute sending contest sent 254 words with only one error, and his Morse was said by the judges to be perfect. The highest recorded speed of legible telegraphy in which the Morse code was used, was made in a previous contest in which 265 words were sent in 5 minutes. An expert operator can send from 35 to 40 words per minute, but a steady working rate of 25 to 30 words per minute is regarded as good." From *A Treatise on Telegraphy*, Vol. II, 1901.

This was 1901, so the bug was not yet invented. The sender was using a hand key. We don't know what standard they were using for testing in the late 19th century, but 254 words in 5 minutes is 50 words per minute by the metric of the day. Now let's put this in the proper context. The American Morse code is different from the International Code by 11 letters. The American Morse code makes use of the 'spaced characters.' For example C is . . . rather than -. . and Y is . . . rather than -. . . Hence the American Morse code is about 25 to 30 percent faster than the International code. So for comparative purposes and with all else being equal, you could reduce the above speeds by 25 or 30 percent to compare to speeds of International senders. So 50 words a minute in American Morse should translate to 35 words a minute in International Morse.

This is consistent with Harry Turner's record of WWII. *Neal McEwen.*

Vibroplex Case Maker. An interesting thread on Vibroplex cases developed on the Morsecode email reflector:

- I received a pinned-lever Lightning Bug Standard today, S/N 1152xx, in its original case. Inside the case was a label. It's a bit hard to read, but it says "Luce-Packwood" and "Kansas City, MO". It is made of stamped metal foil and is on the back panel of the case, i.e., the inside of the case end panel at the damper end. *Randy Cole.*
- I also have a case that has the same Luce-Packwood label in the far, inside end. Mine came with a Martin Flash Key. All of my other, older style Vibroplex cases are 9 inches long. The Luce-Packwood case is 1/4 inch longer. *Don Karvonen.*
- Luce-Packwood is a luggage company in Kansas City. They are located at 9th and Broadway - a very old business area. Their website says they have been in business for 60 years. *Al Tirevold.*
- I should have mentioned that I'd seen one like it previously, and I remembered the Kansas City location. In addition, it's a mass-produced foil label, so I think we can be fairly sure that Luce-Packwood was the manufacturer. However, it didn't cross my mind to check if they were still in business, and I even lived in Kansas City for a while in the late 60s. *Randy Cole.*

European Bugs. As some of you may know, I have turned some of my attention to studying the keys of W.W.I. I have found a very interesting tidbit from "Circuits of Victory," by Lavine, 1921. It describes the involvement on the U.S. Army Signal Corps in W.W.I. When the Army Signal Corps first arrived in France in 1917, there were no telegraph lines for the American Expeditionary Forces to use. So the French gave them a few circuits for use. The man put in charge was Lt. Frank H. Fay. Lavine called him the most knowledgeable Signal Corps person in the matter of electrical science and an expert on telephone and telegraph including duplex and printing telegraphy and composited, phantomed and simplex lines.

Shortly after Fay took over the lines, AEF traffic became heavy. He needed more throughput as we say today. "His first step was to change from 'open' to 'closed' circuit, permitting the use of American sending machines (Vibroplexes), and speeding up the service all along the line, by adapting it to American telegraph practice." As I read this, it dawned on me that Lavine has just explained to us why we don't see any landline bugs in Europe. (Our European cousins correct me if I'm wrong) A European landline key has two sets of contacts, one set NC and one set NO. So you just can't throw a bug in parallel with a European landline key. I guess I had never thought about this before. Now I'm guessing that all the European made bugs such as the British Eddystone and French Vibro-Morse were used exclusively for radio telegraph work.

Do any of you know of any European landline bugs? We see Australian landline bugs. Is that because the Aussies used closed circuit lines as we did in the U.S.? *Neal McEwen.*

MESCO. Re Joe Jacobs remarks shown on pg 407. He writes that MESCO was a retailer not a maker, and bought most of their keys from Bunnell. However, in the 1915 edition hardcover catalog I have from MESCO they proudly indicate that they are, in fact, manufacturers of "most of the items shown in the catalog" and I believe it mentions keys specifically.

They mention several factories - different locations than their main office or branches. The major one being on Montgomery Street in Jersey City. I think they did resell some Bunnell stuff since many of their ads show exact same product drawings as Bunnell, however I happen to have quite a few MESCO pieces and have found all of them to be quite different from any Bunnell marked items I've seen. This includes the wood bases. I found this out the hard way recently when I was restoring two separate mainline combo KOB's - key, sounder and relay on a single board. Each was missing a major component or two, so when I went to my junk box and started to swap Bunnell and MESCO parts I saw how the base dimensions were quite different on each maker's piece despite striking similarities in the appearance of the sounders, relays and keys. MESCO straight keys use slightly longer and more narrow oval bases. The standard plain-jane sounders have different base mounting configurations and the relay pieces - like the main spacing adjust spring standard - are very similar in appearance to the Bunnell's but a notch or so smaller in scale. **Pete Malvasi.**

Cootie Key. Last night I was digging through some manuals intended for training maritime radio operators for RCA, by RCA Institutes, 1929. There is an interesting comment about the use of sideswipers that some of us might not agree with.

"Many radio operators use a Vibroplex and a few use the type known as the 'cooty-key,' or 'sideswiper.'" Little can be said concerning the cooty-key. It does not save time or labor and, in the opinion of the authors, is inferior to the Vibroplex. The cooty-key has found little or no favor in the operating profession".

It is also interesting to note the spelling of "cooty". Other places I've seen it, it has been spelled "cootie." **Neal McEwen**

Signal Corps. I've just finished looking through *The First Battalion: The Story of the 406th Telegraph Battalion SCUSA* (Signal Corps USA). This is a detailed documentation of the activities of a Signal Corps Battalion in WWI. Some very interesting observations: 1. This Battalion concerned itself nearly exclusively with landline telephone circuits. Only a small portion of its duties involved monitoring trench and wireless communications. 2. Almost no mention is made of wireless in all 300 pages. No direct mention of any of the exact equipment used is made. **Russ Kleinman.**

Naval KOBs. I now have more provenance on Naval KOBs used in landline service. John Holman reports a friend was a Radio Officer on a battle ship and worked WU wires while in port. More to follow up on. **Neal McEwen.**

Spark Key Project. I've added some more spark key manufacturers to the Spark Key Project:

- From Italy, there was P. Conalb - seems to have been a direct knock-off of Marconi.
- From Czechoslovakia, there was Vaclav Hruby - a complete commercial small spark transmitter with strap key was made by Vaclav Hruby.
- From Pittsburgh, PA there was Edgcomb-Pyle.

The Spark Key Project continues to expand with information and pictures from our recent trip to the Smithsonian Institution. It is worth taking a peek there at the new information. A great deal has been added with regards to Navy Type Nos. for keys used up to 1923. The listings for Marconi, Massie, Simon and several others have been improved. **Russ Kleinman**

Old Ads. I am in the process of cleaning out the treasures from an old timer's estate. Somehow I always stop when I run into a very old magazine. Here are a couple of interesting ads that I came across last night.

1. From *RADIO*, December 1939 issue, page 78. Quarter page ad by Montgomery Ward & Co., with clip out coupon to order their new Amateur Radio Catalog. I knew that Montgomery Ward sold radio related items, but I did not know they had a special catalog. The ad talks about keys and other items.
2. From *CQ*, September 1947, page 81. Ad from Electronic Supplies of Tulsa, Oklahoma. It has a picture of Lionel J-36 with following text, "High Quality Speed Key. Don't Miss This Bargain. Made by Lionel on the pattern made famous by well - known speed-key mfr. Money back if not pleased. BRAND NEW, IN ORIGINAL BOXES - \$6.95. Four for \$27.00."

I knew that Lionel J-36's were offered on the surplus market, but this is the first ad I have ever seen.
Don Karvonen.

Lindholm and Wikstrom. I recently acquired my first Swedish key, made by Lindholm and Wikstrom of Stockholm. Now that I have it and see it in the flesh, I am even more impressed with the engineering and craftsmanship. It is unusual in that the contacts are at the back of the key on a steel tongue (away from the operator); what appears to be contacts in front are not contacts but 'stops.' Both the hammer and anvil contact are at frame potential.

The basic design was for this type of key was by Henric Oeller in 1857. He was issued Swedish patent No. 54 for the design. Oeller started making these keys in 1859 and made them until his death in 1889. Two of Oeller's employees, Lindholm and Wikstrom, broke away and set up their own shops in 1878. When Oeller died, they bought his tooling and inventory and made telegraph instruments until 1905. There were two versions of this key, one with a long lever and one with a short lever as shown in the photos. This key was made c. 1880 to 1905. L.M. Ericsson made this design up until 1939. There is a strong resemblance between the Marconi PS-213 (20s to 30s) and the Oeller design. Thanks to Jan Moller for helping with the history of Oeller and L&W. **Neal McEwen.**

Caton Instrument Shop. The Caton Instrument Shop in Ottawa, Illinois existed long before it was leased to Western Union in July of 1867. Mr. Henning, was more than just an employee, he was the superintendent of the entire establishment. In the late 1860's, there were three Western Union shops, each had their own superintendent. They were: (by order of their manufacturing capabilities)

New York, New York, G.M. Phelps
Ottawa, Illinois, R. Henning
Louisville, Kentucky, W. Johnson

In all three shops you can see the similarities in how Western Union marked their instruments during this period. The instruments were engraved with the maker's name (the superintendent of the shop) along with W. U. Tel Co. By 1872, only New York and Ottawa still existed as Western Union shops. After the establishment of the Western Electric Manufacturing Co., Chicago, in 1872, the New York shop was left as the only manufacturing facility totally owned and operated by Western Union.

In the spring of 1879, Western Union sold their New York shop to Western Electric Manufacturing, thus ending the era completely where they manufactured their own instruments. I am right in the middle of a project related to this and hope to produce something in more detail soon. *John Casale*

Standard Radio Bugs. This morning I had the pleasure of visiting with a real old timer. He wanted me to ID a bug he had. Much to my surprise, it was a Standard Radio bug. He was the original owner and never knew who made it. The bug was one of the Standard Radio bugs made without a serial number or label. The nice part of the story is that he recalls when he bought it. He was a radiotelegraphy student at an aviation school in Kansas City and bought the bug while there in 1930 or 1931. I asked him if he purchased it from Standard and he said no; the school made the bugs available. This is interesting for I know of no known advertisement for standard radio although there seem to be quite a few of the bugs around. Could it be Standard did not sell direct? This is the first definitive date I've gotten for Standard. The bug has a few variations I've not seen on other Standard bugs. It looks more like a Vibroplex than other Standards, not as clunky on some of the parts and no pedestals for the dot and dash posts. The frame has a tab by the top trunnion pin screw that extends toward the operator. *Neal McEwen*

Housekeeping matters.

1. I often receive queries about when the next issue of the Keyletter will be published. The answer is, "When I get enough material to publish one"! In the last couple of years I have gone to larger issues to save postage and printing costs, so over the course of a year you will receive fewer issues, but the same amount of content. This operation is run on a shoe string, so any savings really help.
2. Several subscribers have asked about submitting material. All items are gratefully received, and the format does not matter. Photos are tough to run, so digital photos or high-resolution scans are appreciated.
3. Subscription costs. I send reminders when your subscription expires. One reminder will be sent with the final issue, and your subscription will cease at that point unless further donations are received. If you don't hear from me, don't worry about it. Some of you are paid up through about 2050 at the present rate of publication! You can tell how far ahead you are paid by looking at your mailing envelope. The two digit number after your name indicates the issue number that you are paid through.

As always, please keep the cards, letters and e-mails coming!